

SAT 8/5/14

how many integers $> 20 + < 30$
are each the product of TWO DIFFERENT
numbers, both of which are prime.

21	22	23	24	25
3×7	$2 \cdot 11$	X	X	X
☺	☺			

26	27	28	29
$2 \cdot 13$	$3 \cdot 9$	$4 \cdot 7$	X
☺	X	X	

$2 \cdot 3 \cdot 5^2 = 300$
 $2 \cdot 150$
 $3 \cdot 50$
 $5 \cdot 10$
 $2 \cdot 5$

POSITIVE INTEGERS

PRIME

COMPOSITE
factors into
multiple
primes

$4 = 2 \cdot 2$

perfect
squares

most
everyone
el8
6

NATURAL NUMBERS

1, 2, 3, 4, 5, 6, ...

8/5/#18

SAT

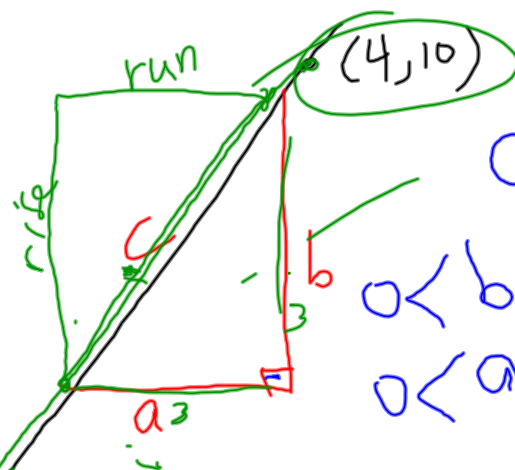
A) $2, 5, \sqrt{29}$

B) $2, 5, 7$ X

~~C) $3, 3, 3\sqrt{2}$~~

~~D) $3, 4, 5$~~

~~E) $4, 5, \sqrt{41}$~~



$$a^2 + b^2 = c^2$$

$$0 < b < 10$$

$$0 < a < 4$$

$$m = \frac{10 - 0}{4 - 0} = \frac{10}{4} = \frac{5}{2}$$

$$\frac{b}{a} = \frac{5}{2}$$

8/5/#10 If k is a pos. integer, $[k]$

be def^d as the set of ALL multiples of k .

Find the set that is totally contained in $[2], [3], [5]$

$$[2] = 2, 4, 6, 8, 10, 12, \dots$$

$$[3] = 3, 6, 9, 12, 15, \dots$$

$$[5] = 5, 10, 15, 20, 25, \dots$$

$$[5] = 5, 10, 15, 20, 25, \dots$$

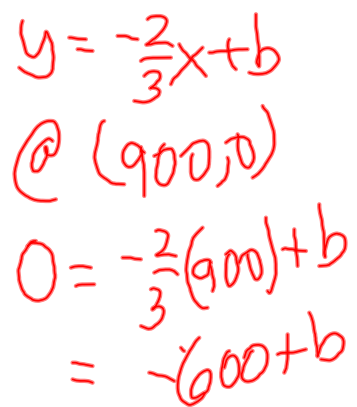
$$[6] = 6, 12, 18, 24, \dots$$

$$[10] = 10, 20, 30, \dots$$

$$\cancel{[21]}$$

$$[60]$$

$\dots, 240, 180, 20, 60 \dots$



$@ (900, 0)$

$$0 = -\frac{2}{3}(900) + b$$

$$\frac{441.7}{3} 100 + \frac{1}{\cancel{e}} x = - \frac{2}{\cancel{w}} x + 600$$

$$\frac{1}{4}x + \frac{2}{3}x = 500$$

$$\frac{11}{12}x = 500$$

$\frac{458.3}{4} = 114.6$
 $x = 500\left(\frac{11}{12}\right) \approx 458.3$

AD

$$x(t) = 900 - 3t$$

$$y(t) = 0 + 2t$$

H

$$x(t) = 0 + 4t$$

$$y(t) = 100 + t$$

$$X(t) = 900 - 3t \quad \rightarrow \quad 3t = 900 - X(t)$$

$$y(t) = 2t \quad \rightarrow \quad t = 300 - \frac{x}{3}$$

$$y = 2\left(300 - \frac{x}{3}\right)$$

$$y = 600 - \frac{2}{3}x$$

